

# **Quick Summary of Voyageurs NP GRI meeting June 1-2, 2000**

## **Summary**

A geologic resources inventory workshop was held for Voyageurs NP (VOYA) on June 1-2, 2000 to view and discuss the park's geologic resources, to address the status of geologic mapping for compiling both paper and digital maps, and to assess resource management issues and needs. Cooperators from the NPS Geologic Resources Division (GRD), NPS Voyageurs NP, University of Minnesota and Minnesota Geological Survey staff were present for the workshop.

This involved a very cold and wet one-day field trip to view the geology of the Voyageurs NP area led by Chris Hemstad (University of Minnesota) and another one-day scoping session to present overviews of the NPS Inventory and Monitoring (I&M) program, the Geologic Resources Division, and the on-going Geologic Resources Inventory (GRI). Round table discussions involving geologic issues for Voyageurs NP included interpretation, the status of geologic mapping efforts, sources of available data, geologic hazards, and action items generated from this meeting.

**For a list of attendees, see the last page of this document.**

## **Items of discussion included the following:**

### **Geologic Mapping**

Chris Hemstad (University of Minnesota PHD candidate) is currently involved in a project to produce a compilation geologic map of Voyageurs NP at *1:50,000* scale. He will be using the existing USGS "*1:50,000 scale metric topographic map of Voyageurs NP, Minnesota (1979)*" as the base map.

He is using some of the existing unpublished "detailed reconnaissance" work of David Southwick (Minnesota GS) and Richard Ojakangas (University of Minnesota) and filling in where necessary. Southwick and Ojakangas focused their efforts on shoreline mapping as part of mineral appraisal studies. Chris is mapping at *1:24,000* scale using transects across various land areas of Voyageurs NP. Chris is being funded through the EDMAP program and has received some funding from the NPS-GRI for his mapping activities. USGS funds cover 50% and the University of Minnesota covers the other 50%. He is in the second year of his EDMAP project.

At the time of this meeting, Chris had completed *1:24,000* scale detailed mapping of the Island View quadrangle (published by the MN GS; publication number \_\_\_\_ ) and is close to completion of the Cranberry Bay quadrangle.

Previous work of Southwick and Ojakangas is also at *1:24,000* scale (??). Both will be compiling their existing work on mylars to be put in a final compilation by Chris. It is assumed that both edge- and unit-matching will be undertaken by all three authors prior to compilation.

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Chris sees the ultimate product of the compiled map as a 1:50,000 scale map that could be sold in the VOYA visitor center. Funding for this cannot come from GRI, as we are not allowed to fund publication costs and will need to be sought elsewhere.

As part of this mapping, it was suggested to work up the Kettle Falls and Ash River quadrangles (because of its high use) as detailed as possible as part of this project.

### ***Here were the timetables that the involved parties anticipated:***

- Chris Hemstad believes he'll be finished with all field work by October 2000, and will then spend the winter months compiling his information
- Dave Southwick thought a reasonable time for him to complete his compilations would be by October 2001
- Unsure of Richard Ojakangas' timetables.
- Acquire mylars immediately after meeting to begin compilations; separate copies to Hemstad, Ojakangas and Southwick

### ***Digital Geologic Map coverage:***

At the time of this meeting, there was still confusion as to how to complete digital geologic coverage. By meetings end, it was suggested that the maps be digitized at the MN GS, so that the maps creator could oversee the digitization and answer any questions that may come up with regards to interpreting the maps.

As of Fall 2000, GRI staff have allocated \$5000 to cover digitization costs and will transfer the money to VOYA to distribute to the MN GS or whoever will be digitizing the VOYA maps in Fall 2000.

If this were done at the MN GS, GRI staff would like to see the NPS Digital Geologic map model utilized (as demonstrated by GRI staff during the scoping session). A copy of the model can be supplied to the digitizing party. Contact Tim Connors for further information.

### **Disturbed Lands and Abandoned Mineral Lands**

VOYA staff expressed interest in compiling data about disturbed land sites (gravel sites and old campgrounds and the Kettle Falls area), and other abandoned mineral lands (AML). It was suggested they contact GRD Disturbed Lands/ AML coordinator Dave Steensen (303-969-2014) with specific concerns on these matters.

Additionally, the Bureau of Mines has published "*Mineral Occurrences and Development Potential near Voyageurs NP, Minnesota*" (Mineral Land Assessment Open File Report 5-94).

### **Interpretation:**

Currently Kendall Dickinson (retired USGS) is working on "Geology of Voyageurs NP" as an interpretive product for the general public. He is also seeking funding for this publication. It is not yet known if this publication would be suitable for the GRI needs of our geologic report and is currently under review by GRD staff.

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Southwick and Ojakangas would like the opportunity to critically review this report.

Also mentioned were other geologic publications specific to Minnesota geology including a geology underfoot book and the Roadside Geology of Minnesota, both of which were likely to have sections on VOYA and other NPS areas in Minnesota.

### **Geologic Report:**

A comprehensive technical geologic report was discussed as a necessary component of the GRI. Again, at present, it is not known if Dickinson's publication will fulfill this requirement.

It was suggested that perhaps Chris Hemstad, Richard Ojakangas or David Southwick could be "coerced" into writing such a report in their copious free time for compensation. If they are interested, please let GRI staff know.

### **Miscellaneous:**

Geologic hazards include boats hitting rocks in the lake, the dangers of falling in the Little American Mine, and potential for earthquakes in the region

David Southwick mentioned he has done a cooperative report on Pipestone NM; GRI staff would be interested in obtaining this report from the MN GS.

**Voyageurs NP**  
**Geological Resources Inventory Workshop Invitees/Participants**  
**June 1-2, 2000**

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